DOCUMENT RESUME

ED 262 353 CG 018 588

AUTHOR Fleming, James S.; And Others
TITLE Sex Differences in Role Patterns of College Students.
PUB DATE Aug 85
NOTE 19p.; Paper presented at the Annual Convention of the American Psychological Association (93rd, Los Angeles, CA, August 23-27, 1985).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Behavior Patterns; College Students; Higher Education; *Individual Activities; *Sex Differences; *Sex Role
IDENTIFIERS *Activities Inventory

ABSTRACT

Much of the sex role research published in the late seventies was concerned with measuring masculinity and femininity, based on stereotyped trait ratings using tests like the Bem Sex Role Inventory or the Personal Attributes Questionnaire. In response to the need for a wider variety of measures, the Activities Inventory (AI), a checklist of everyday behaviors in which college students might be expected to engage, was developed. Based on initial responses to this instrument, a revised version, the AI-2, was developed as an 80-item inventory with a five-point step scale of frequencies format. The AI-2 was administered to 124 female and 75 male college students. A comparison of factors determined separately by sex revealed seven similar factors. Reliable scales were formed by summation of items matched on both factors: Relating to Significant Other, Religiosity, Personal Care, Home Care, Fixit Person, Sports Involvement, and Scholastic Activities. Three factors (Relating to Significant Other, Religiosity, and Home Care) previously reported for a female sample (Fleming, 1984) were replicated for both sexes. Based on sex differences in means, four of the behavior scales (Personal Care, Home Care, Fixit Person, Sports Involvement) appear promising as sex roles scales based on perceived behavior frequencies. (Four data tables are included.) (Author/NRB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED262353

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)
✓ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
J.S. Fleming
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

CG018588

Sex Differences in Role Patterns of College Students

James S. Fleming, Farah Pezeshki, Pary Banki,
Alan Oda, Patrick Stewart, and Annette Angel-Lahr

California State University, Northridge

Paper presented at the annual meeting of the American Psychological Association, Los Angeles, CA, August, 1985.

Address correspondence concerning this manuscript to:

James S. Fleming
Department of Psychology
California State University, Northridge
Northridge, CA 91330 (818) 885 - 3966

Abstract

Self-ratings of frequencies for 80 everyday behaviors were completed by college students (174 women and 75 men) for the revised Activities Inventory (AI-2). A comparison of factors determined separately by sex revealed seven similar factors. Reliable scales were formed by summation of items matched on both factors: Relating to Significant Other, Religiosity, Personal Care, Home Care, Fixit Person, Sports Involvement, and Scholastic Activities. Three factors (Relating to Significant Others, Religiosity, and Home Care) replicated factors previously reported by Fleming and others. Based on sex differences in means, Personal and Home Care, Fixit Person, and Sports Involvement were identified as behaviorally based sex roles.

Sex Differences in Role Patterns of College Students

In evaluating psychological research, constructs do not stand in isolation, apart from the instruments employed to assess them. Much of the sex roles research published in the late seventies was concerned with measuring masculinity and femininity, based on stereotyped trait ratings using tests like the Bem Sex Roles Inventory (BSRI; Bem, 1974) or the Spence-Helmreich-Stapp (1974, 1975) Personal Attributes Questionnaire (PAQ). Though these scales are still widely used, the current preference for the terms "instrumentality" rather than "masculinity," and "expressiveness" rather than "femininity" say something of the direction of thought in the domain of sex roles (Spence & Helmreich, 1980). Instrumentality pertains to traits like independence, activity, and self-confidence, whereas expressiveness relates to displays of kindness, consideration of others, and a sense of community (Spence & Helmreich, 1980). It is not the recognition that instrumentality and expressiveness are sex roles characteristics that is new, but rather, that these constructs are primarily what the tests measures, rather than more global or multidimensional aspects of masculinity and femininity. Spence and Helmreich (1980) assert that these instruments have "only minimal construct validity, as sex roles measures" (p. 157), and that the narrower definitions are to be preferred.

In response to the need for a wider variety of measures, Fleming et al. (1984) developed the Activities Inventory (AI)--a checklist of everyday behaviors in which college students might be expected to engage. Factor analysis of the women's responses (the number of men

in the sample was too small for factor analysis) produced five factors: Feminine Leisure Activities, Relating to Significant Others, Religiosity, Masculine Activities, and Home Care. These were correlated with PAQ instrumentality and expressiveness, the Attitude Toward Women Scale (AWS; Spence, Helmreich, & Stapp, 1973), and sex differences were also noted. Based on differences by either sex or sex roles, all but Religiosity were identified as role patterns that could legitimately be called sex roles (and Religiosity was positivley correlated with traditional attitude toward women's roles).

Behavior descriptors for the AI were kept as short as possible (e.g., "washing dishes," "singing," "fixing cars," or "studying"). Social, work, study, and athletic behaviors, games, sports, hobbies and passtimes, and self- and home-care items were included, but items which might be considered socially undesirable, such as drinking or substance use, were excluded, as were explicitly sexual behaviors--except the single item "love making." Ubiquitous behaviors, such as eating regular meals and sleeping at night, were eliminated, as were most behaviors which are rarely endorsed by the average individual, though a few of the latter were included for interest (e.g., "mountaineering," "song writing").

For the present paper, a revised instrument, the AI-2, was developed. Prior analyses provided a feel for the texture of the domain of discourse, which was elaborated by shortening the test to include only items which tapped factors uncovered in the first study, or suspected factors based on an examination of correlations and item content. New items were also added to lengthen the putative factor scales, but overall the test was cut in half (80 items). Because the

time required to take the test was thereby reduced, it seemed reasonable to expand from a checklist format to a five-point step scale of frequencies.

Method

Subjects and Procedure

Participants were lower division psychology students at California State University, Northridge (n = 158) and students in psychology and sociology courses at the College of the Canyons community college (n = 41). There were 124 women and 75 men in the study. The AI-2, a demographic blank, and a number of other tests were administered during a one-hour testing session for the CSUN students. Due to a lack of on-campus facilities, the CC students were permitted to take the tests home, but encouraged to fill them in at one sitting without assistance. Among the other tests administered were the above mentioned PAQ and AWS (but as of this writing, these tests have not been scored).

Results and Discussion

Separate factor analyses were conducted within sexes. Based on a scree test the number of factors appeared to be nine in both cases. A principal component analysis was performed, and factors were obliquely transformed by direct oblimin.

Factor Interpretation Across Sexes

Interpretation of the factors within each sex showed that, although there were some differences in the patterns of loadings, seven factors were very similar when the largest loadings (over .40 in most cases, a little higher in some) were compared. Remaining factors did not seem interpretable and were discarded. Loadings defining the

seven factors for each sex are shown in Table 1. Factors were labeled: Relating to Significant Other (RSO), Religiosity (Rel), Personal Care (Pers Care), Home Care (Hm Care), Fixit Person (Fixit), Sports Involvement (Sports), and Scholastic Activities (Schl Act). RSO, Rel, and Hm Care appeared to be similar to factors identified for the female sample by Fleming et al. (1984). Each factor is discussed in turn.

RSO. This is clearly a personal relationship factor. From Table 1 it can be seen that highest loadings on RSO are well matched for both sexes, with 7 of 8 items the same.

Rel. The same high loadings were found for religious behaviors across both sexes. The item "doing community volunteer work" does not seem to quite belong here, and indeed, was later dropped to improve scale reliability.

Pers Care. Only four items were matched here. It does not seem surprising that "going to the beautician" was salient only for the women, but perhaps it is surprising that "putting on makeup or cosmetics" was salient for just the men. Although we hope to further clarify this factor when more data are available, it presently appears that Pers Care contains some behaviors that are common to both sexes and others that are not.

Hm Care. Seven out of eight items were matched by sex; only "shopping for food" did not show up for the men's factor. Because college students often share living quarters with same-sex roommates who usually divide the housekeeping chores, this result is not surprising. Mean differences in the frequencies of these behaviors might be anticipated, however (see below).

Fixit. This factor contains several items related to home and repair. Though similarly interpretable for both sexes, patterns are a little different. "Fishing" loaded on the men's factor, which certainly appeared out of place, and may be a chance result. "Fixing cars" did not load on the women's factor, and the latter also included several additional items pertaining to outdoor work and "cleaning garage." Thus, for women, perhaps "Home Maintenance" would be a better name for this factor. We hope that additional data will help to further clarify its nature for both sexes.

Sports. The emphasis is on active, team sports, though the men's factor includes "bodybuilding" and the women's factor includes passive sports participation items ("attending sporting events;" "watching t.v./listening to radio (sports)"). It is interesting that for neither sex did the factors include individual sporting activities such as "jogging or running" or "swimming." Perhaps "sports" and "fitness" activities are different dimensions, though no factor arose defining the latter.

Schl Act. This factor has to do with studying and school work; it was defined by exactly the same items in both sexes.

Summary. Though most factors were remarkably similar in pattern, there were some exceptions. Apart from minor discrepancies, three of the factors seemed distinct enough for the two sexes to require comment: (a) Sports contained more passive participation items for the women, (b) Fixit for the women contained a greater variety of items, especially regarding home maintenance, and (c) Pers Care items appeared somewhat different for men and women, though there was also some overlap. We believe that it will take more data to determine

whether factors are really distinct across sexes; probably the best null hypothesis for the present is that group differences in factor pattern are mostly due to chance until it can be shown otherwise with a larger data set.

Insert Table 1 about here

Behavior Scales

The possibility that factors may ultimately prove to be qualitatively different for women and men exists, but pattern similarities appeared to outweigh their differences. Scales were constructed based on total scores of items that defined the matched factors for both sexes. Scale correlations and reliabilities are shown in Table 2. The lowest reliability (coefficient alpha) is .73 for Pers Care. The others are all rather strong (in the .80s) considering that these are short behavior scales. Most scale correlations are low, but some are moderate in size. For example, Sports and Fixit--both of which involve active participation of an instrumental nature, are significantly correlated (r = .33, p < .001), and Pers Care and Hm Care are also correlated (r = .23, p < .001) and may reflect a concern for self and self-appearance. Schl Act is in turn correlated with both Pers Care (r = .30, p < .001) and Hm Care (r = .29, p < .001); perhaps they may be tied together by a common thread of social desirability.

Insert Table 2 about here

Sex Differences in Behavior Scales

A multivariate analysis of variance (MANOVA) of the seven behavior scales by sex was highly significant (Wilks lambda = .457; $F(7,191) = 32.48$, $p < .001$). The squared canonical correlation--a measure of overall explained variance--was .54.

Univariate F-tests are summarized in Table 3. Significance level was adjusted for each test so that "investigationwise" alpha level was equal to alpha(i)/7 = .05/7 = .007. Even this seemed liberal considering the sample size (small for factor analysis, but large for small-sample tests of mean differences), so that the .001 level was used for assessing "practical" significance. From Table 3 it is seen that all but RSO and Rel are highly significant. Table 4 shows the means and standard deviations of scores on the scales by sex. It can be seen from the means that women were much higher on Pers Care, Hm Care, and Schl Act than men, but that men scored higher on the "instrumental" scales, Fixit and Sports. The finding that women see themselves as engaging in home care activities more frequently than men is consistent with the stereotyped notion that women are more domestic than men. Likewise, women spending more time on personal care is compatible with the idea that physical self-presentation is more important to women than it is to men. However, the finding that the women see themselves as more academically involved has no obvious explanation that we can see; Fleming and Courtney (1984), for example, found only a small (though significant) correlation of academic self-esteem and sex, with college men having slightly higher average self-esteem scores ($r = .16$, $p < .01$). Before reaching any conclusions regarding sex differences on this factor, a further look

at demographic and personality differences should be undertaken for this subject pool.

Insert Tables 3 and 4 about here

Conclusions

Three of five factors previously reported by Fleming et al. (1984) for a female sample were replicated for both sexes for this study: Relating to Significant Other, Religiosity, and Home Care. Two other factors previously identified (Feminine Leisure Activities and Masculine Activities) were not recovered, perhaps because the AI-2 has been refined so that those factors have become more differentiated. A weak sex difference was found for Religiosity--not considered acceptable for present statistical purposes ($p < .05$)--and no difference was found for Relating to Significant Other.

Based on the sex differences found in this study, four of the behavior scales (Pers Care, Hm Care, Fixit, and Sports) appear promising as sex roles scales based on perceived behavior frequencies. It will be of interest to see how these scales relate to other sex roles measures, and with attitudinal data pertaining to role expectations, which we expect to examine soon.

References

Bem, S. L. (1974). The measurement of psychological androgyny. Journal of Consulting and Clinical Psychology, 42, 155-162.

Fleming, J. S., Angel-Lahr, A. L., Iventosch, L., Spooner, P. S., & Green, L. E. (1984, April). A sex roles instrument based on everyday activities. Paper presented at the annual meeting of the Western Psychological Association, Los Angeles.

Fleming, J. S., & Courtney, B. E. (1984). The dimensionality of self-esteem: II. Hierarchical facet model for revised measurement scales. Journal of Personality and Social Psychology, 46, 404-421.

Spence, J. T., & Helmreich, R. L. (1980). Masculine instrumentality and feminine expressiveness: Their relationships with sex role attitudes and behaviors. Psychology of Women Quarterly, 5, 147-152.

Spence, J. T., Helmreich, R. L., & Stapp, J. (1973). A short version of the Attitude Toward Women Scale (AWS). Bulletin of the Psychonomic Society, 2, 219-220.

Spence, J. T., Helmreich, R. L., & Stapp, J. (1974). The Personal Attributes Questionnaire: A measure of sex role stereotypes and masculinity-femininity. JSAS Catalog of Selected Documents in Psychology, 4, 43. (Ms. no. 617)

Spence, J. T., Helmreich, R. L., & Stapp, J. (1975). Ratings of self and peers on sex role attributes and their relation to self-esteem and conceptions of masculinity and femininity. Journal of Personality and Social Psychology, 32, 29-39.

Table 1

Largest Factor Loadings on Factors Matched by Sex

Men:		Women:	
Factor: "Relating to Significant Other" (RSO)			
1. attending to needs of partner or mate	.82	1. kissing (partner or mate)	.87
2. kissing (partner or mate)	.80	2. hugging or embracing (partner or mate)	.86
3. hugging or embracing (partner or mate	.78	3. attending to needs of partner or mate	.82
4. massaging someone	.71	4. love making	.63
5. being massaged by someone	.69	5. being massaged by someone	.58
6. dating	.69	6. massaging someone	.53
7. love making	.59	7. dating	.51
8. buying a gift for someone special	.58		
Factor: "Religiosity" (Rel):			
1. attending Bible or religious study group	.82	1. reading Bible or other religious writings	.89
2. praying	.80	2. attending Church or place of worship	.87

(table continues)

Table 1, Continued

4. attending Church or place of worship	.72	4. praying	.76
5. watching t.v./listening to radio (religious shows)	.68	5. watching t.v./listening to radio (religious shows)	.69
6. doing community volunteer work	.55	6. doing community volunteer work	.45

Factor: "Personal Care" (Pers Care)

Men:		Women:	
1. selecting clothes to wear	.70	1. shopping for clothes	.79
2. shopping for clothes	.60	2. having hair styled	.68
3. having hair styled	.53	3. going to beautician	.65
4. caring for hair	.48	4. caring for hair	.62
5. putting on cosmetics or makeup	.48	5. selecting clothes to wear	.54
6. taking part in club, sorority, or fraternity activities	.47		
7. caring for skin	.47		

(table continues)

Table 1, Continued

Men:		Women:	
Factor: "Home Care" (Hm Care)			
1. cleaning bathroom	.78	1. dusting furniture	.73
2. washing dishes	.71	2. cleaning bathroom	.68
3. doing laundry	.66	3. doing laundry	.66
4. dusting furniture	.63	4. washing dishes	.63
5. taking out the trash	.57	5. vacuuming	.62
6. cooking	.46	6. shopping for food	.62
7. vacuuming	.46	7. cooking	.59
		8. taking out the trash	.49
Factor: "Fixit Person" (Fixit)			
1. fixing appliances	.77	1. doing heavy yard work	.79
2. making electrical repairs	.74	2. gardening	.69
3. doing home repairs	.70	3. doing home repairs	.64
4. fixing cars	.67	4. painting faded furniture or walls	.62
5. fishing	.50	5. making electrical repairs	.61
6. repairing furniture	.44	6. cleaning garage	.59
		7. fixing appliances	.53
		8. fixing plumbing	.48

(table continues)

Table 1, Continued

Men:		Women:	
Factor: "Sports Involvement" (Sports)			
1. playing football	.83	1. playing football	.72
2. bodybuilding	.49	2. playing baseball or softball	.66
3. playing baseball or softball	.48	3. playing basketball	.64
4. playing basketball	.45	4. attending sporting events	.52
		5. playing soccer or rugby	.49
		6. watching t.v./listening to radio (sporting events)	.47
Factor: "Scholastic Activity" (Schl Act)			
1. reading material for school assignments	.86	1. studying	.77
2. doing homework assignments	.70	2. doing homework assignments	.75
3. preparing for exams	.65	3. doing homework assignments	.73
4. attending classes	.62	4. reading material for school assignments	.68
5. studying	.54	5. attending classes	.58

Table 2

Behavior Scale Correlations and Reliabilities

	Scale						
Scale	RSO	Rel	Pers Care	Hm Care	Fixit	Sports	Schl Act
RSO	.87						
Rel	-.06	.88					
Pers Care	.28	.13	.73				
Hm Care	.17	.18	.23	.83			
Fixit	-.04	.04	-.20	.08	.80		
Sports	.06	.14	-.27	-.13	.33	.80	
Schl Act	.07	.16	.30	.29	-.09	-.03	.85

Note. Diagonal entries contain coefficient alpha.

Table 3

Univariate F-tests

for Behavioral Scales

Variable	F	p
RSO	1.02	ns
Rel	5.45	.05
Pers Care	82.66	.001
Hm Care	37.05	.001
Fixit	32.24	.001
Sports	52.26	.001
Schl Act	22.13	.001

Table 4

Means and Standard Deviations for Behavioral Scales by Sex

	Men (n = 75)		Women (n = 124)	
Variable	M	SD	M	SD
RSO	23.59	6.33	24.51	6.01
Rel	9.88	5.09	11.76	5.72
Pers Care	18.54	4.21	23.69	3.64
Hm Care	18.85	5.46	23.86	5.70
Fixit	8.76	3.17	6.52	2.41
Sports	7.99	2.87	5.24	2.40
Schl Act	20.11	3.25	22.04	2.51